CLAIM AMENDMENTS

1.   (Original) A method for establishing a non-standard data rate in a wireless communication system, the method comprises:

establishing a standard specified data rate
for a given data transmission;

determining whether data rate of the given data transmission can be adjusted from the standard specified data rate by a non-standard data rate adjustment;   and

when the data rate of the given data transmission can be adjusted from the standard specified data rate by a non-standard data rate adjustment, adjusting the standard specified data rate by the non-standard data rate adjustment to produce a non-standard data rate of the given data transmission.

2.   (Original) The method of claim 1, wherein the establishing the standard specified data rate further comprises:

selecting a first standard data rate of a plurality of standard data rates for the given transmission;

determining whether the first standard data rate provides an acceptable error rate for the given transmission;

when the first standard data rate provides an acceptable
error rate, utilizing the first standard data rate as the
standard specified data rate; and

when the first standard data rate does not provide an
acceptable error rate, selecting another standard data rate
of the plurality of standard data rates until the another
standard data rate provides the acceptable error rate.

3.   (Original) The method of claim 2, wherein the
selecting the first standard data rate further comprises at
least one of:

selecting lowest standard data rate of the plurality of
standard data rates;

selecting highest standard data rate of the plurality of
standard data rates;

selecting an arbitrary one of the plurality of standard
data rates;

selecting the first standard data rate based on a histogram
of previously used standard data rates of a wireless
communication device of the given data transmission; and

selecting the first data rate based on standard data rates
utilized to support other data transmissions.

4.   (Original) The method of claim 2 further comprises:

determining whether the first standard data rate provides
an acceptable error rate by:

> determining whether an error indication is less than a
> lower error threshold;

when the first standard data rate does not provide an
acceptable error rate, selecting the another standard data
rate of the plurality of standard data rates to have a
greater data rate than the first standard data rate.

5.   (Original) The method of claim 2 further comprises:

determining whether the first standard data rate provides
an acceptable error rate by:

> determining whether an error indication is greater
> than an upper error threshold;

when the first standard data rate does not provide an
acceptable error rate, selecting the another standard data
rate of the plurality of standard data rates to have a
lower data rate than the first standard data rate.

6.   (Original) The method of claim 1, wherein the
determining the standard specified data rate further
comprises:

selecting a standard data rate of a plurality of standard
data rates for the given transmission.

7.   (Original) The method of claim 1, wherein the determining whether the data rate of the given data transmission can be adjusted from the standard specified data rate by a non-standard data rate adjustment further comprises:

interpreting an error indication with respect to at least one of: a lower error threshold and an upper error threshold;

determining error margin between the error indication and the at least one of the lower and upper error thresholds; and

determining the non-standard data rate adjustment based on the error margin.

8.   (Original) The method of claim 7, wherein the determining the non-standard data rate adjustment further comprises at least one of:

incrementing the data rate of the given data transmission by at least one non-standard data rate increment based on the error margin;   and

calculating the non-standard data rate adjustment as a function of at least one of: the error margin, the standard specified data rate, the lower error threshold, the upper error threshold, and the error indication.

9.   (Original) The method of claim 1, adjusting the standard specified data rate by the non-standard data rate adjustment further comprises at least one of:

changing a coding rate to a non-standard code that corresponds to the non-standard data rate; and

changing constellation encoding to a non-standard constellation encoding scheme.

10.   (Original) The method of claim 1 further comprises:

sending a message indicating the non-standard data rate to a wireless communication device of the given data transmission.

11. (Original) A wireless communication device capable of transmitting data using non-standard data rates in a wireless communication system, the wireless communication device comprises:

encoding module operably coupled to encode data based on a coding rate to produce encoded data;

puncture module operably coupled to increase rate of the encoded data based on the coding rate to produce a punctured data;

modulation mapping module operably coupled to modulate the punctured data to produce modulated data;

rate determination module operably coupled to produce the coding rate by:

identifying one of a plurality of standard data rates for a given data transmission;

determining whether the one of the plurality of standard data rates for the given data transmission can be adjusted by a non-standard data rate adjustment; and

when the data rate of the given data transmission can be adjusted by a non-standard data rate adjustment, adjusting the one of the plurality of standard data rates by the non-standard data rate adjustment to produce the coding rate.

12. (Original) The wireless communication device of claim 11 further comprises:

transmission section operably coupled to convert the modulated data into a radio frequency signal.

13. (Original) The wireless communication device of claim 11 further comprises:

processing module; and

memory operably coupled to the processing module, wherein the memory includes operational instructions that cause the processing module to:

function as the modulation mapping module to modulate the punctured data based on a modulation mode; and

function as the rate determination module to generate the modulation mode by:

    determining whether one of the plurality of standard modulation modes for the given data transmission can be adjusted to a non-standard modulation mode; and

    when the one of the plurality of standard modulation modes for the given data transmission can be adjusted to a non-standard modulation mode, setting the modulation mode to the non-standard modulation mode.

14. (Original) The wireless communication device of claim 13, wherein the memory further comprises operational

instructions that cause the processing module to determine whether the data rate of the given data transmission can be adjusted from the standard specified data rate by a non-standard data rate adjustment by:

interpreting an error indication with respect to at least one of: a lower error threshold and an upper error threshold;

determining error margin between the error indication and the at least one of the lower and upper error thresholds; and

determining the non-standard data rate adjustment based on the error margin.

15. (Original) The wireless communication device of claim 14, wherein the memory further comprises operational instructions that cause the processing module to determine the non-standard data rate adjustment by at least one of:

incrementing the data rate of the given data transmission by at least one non-standard data rate increment based on the error margin; and

calculating the non-standard data rate adjustment as a function of at least one of: the error margin, the standard specified data rate, the lower error threshold, the upper error threshold, and the error indication.

16. (Original) The wireless communication device of claim 13, wherein the memory further comprises operational

instructions that cause the processing module to adjust the standard specified data rate by the non-standard data rate adjustment by at least one of:

changing a coding rate to a non-standard code that corresponds to the non-standard data rate; and

changing constellation encoding to a non-standard constellation encoding scheme.

17. (Cancelled)

18. (Cancelled)

19. (Original) A wireless communication device capable of transmitting data using non-standard data rates in a wireless communication system, the wireless communication device comprises:

processing module; and

memory operably coupled to the processing module, wherein the memory includes operational instructions that cause the processing module to:

establishing a standard specified data rate for a given data transmission;

determining whether data rate of the given data transmission can be adjusted from the standard specified data rate by a non-standard data rate adjustment; and

when the data rate of the given data transmission can be adjusted from the standard specified data rate by a non-standard data rate adjustment, adjusting the standard specified data rate by the non-standard data rate adjustment to produce a non-standard data rate of the given data transmission.

20. (Original) The wireless communication device of claim 19, wherein the memory further comprises operational instructions that cause the processing module to establish the standard specified data rate by:

selecting a first standard data rate of a plurality of standard data rates for the given transmission;

determining whether the first standard data rate provides an acceptable error rate for the given transmission;

when the first standard data rate provides an acceptable error rate, utilizing the first standard data rate as the standard specified data rate; and

when the first standard data rate does not provide an acceptable error rate, selecting another standard data rate of the plurality of standard data rates until the another standard data rate provides the acceptable error rate.

21.   (Original) The wireless communication device of claim 20, wherein the memory further comprises operational instructions that cause the processing module to select the first standard data rate by at least one of:

selecting lowest standard data rate of the plurality of standard data rates;

selecting highest standard data rate of the plurality of standard data rates;

selecting an arbitrary one of the plurality of standard data rates;

selecting the first standard data rate based on a histogram of previously used standard data rates of a wireless communication device of the given data transmission; and

selecting the first data rate based on standard data rates
utilized to support other data transmissions.

22.   (Original) The wireless communication device of claim
20, wherein the memory further comprises operational
instructions that cause the processing module to:

determine whether the first standard data rate provides an
acceptable error rate by:

    determining whether an error indication is less than a
    lower error threshold;

when the first standard data rate does not provide an
acceptable error rate, select the another standard data
rate of the plurality of standard data rates to have a
greater data rate than the first standard data rate.

23.   (Original) The wireless communication device of claim
20, wherein the memory further comprises operational
instructions that cause the processing module to:

determine whether the first standard data rate provides an
acceptable error rate by:

    determining whether an error indication is greater
    than an upper error threshold;

when the first standard data rate does not provide an
acceptable error rate, select the another standard data
rate of the plurality of standard data rates to have a
lower data rate than the first standard data rate.

24. (Original) The wireless communication device of claim 19, wherein the memory further comprises operational instructions that cause the processing module to determine the standard specified data rate by:

selecting a standard data rate of a plurality of standard data rates for the given transmission.

25. (Original) The wireless communication device of claim 19, wherein the memory further comprises operational instructions that cause the processing module to determine whether the data rate of the given data transmission can be adjusted from the standard specified data rate by a non-standard data rate adjustment by:

interpreting an error indication with respect to at least one of: a lower error threshold and an upper error threshold;

determining error margin between the error indication and the at least one of the lower and upper error thresholds; and

determining the non-standard data rate adjustment based on the error margin.

26. (Original) The wireless communication device of claim 25, wherein the memory further comprises operational instructions that cause the processing module to determine the non-standard data rate adjustment by at least one of:

incrementing the data rate of the given data transmission
by at least one non-standard data rate increment based on
the error margin;   and

calculating the non-standard data rate adjustment as a
function of at least one of: the error margin, the standard
specified data rate, the lower error threshold, the upper
error threshold, and the error indication.

27.   (Original) The wireless communication device of claim
19, wherein the memory further comprises operational
instructions that cause the processing module to adjust the
standard specified data rate by the non-standard data rate
adjustment by at least one of:

changing a coding rate to a non-standard code that
corresponds to the non-standard data rate;   and

changing constellation encoding to a non-standard
constellation encoding scheme.

28.   (Original) The wireless communication device of claim
19, wherein the memory further comprises operational
instructions that cause the processing module to:

send a message indicating the non-standard data rate to a
wireless communication device of the given data
transmission.